1988 INDEX

Cover photos

Photo	Month	Photographer
Denver plane crash	Jan.	Karen Schulenberg
Aerial truck	Feb.	NFPA
Fire fighter	Mar.	Brian Smith
Chicago building, lumberyard fire	Apr.	Tom McCarthy
Bushfire ignites tanker	May	Jeff Cutting
National Fallen Firefighters Memorial	June	Cameron Davidson
Physically fit fire fighter	July	Peter Garfield
Chief Russell Sanders, Louisville, Ky.	Aug.	David Sharpe
Chief James J. Silvernail, Grover, Mo	Sept.	Cameron Davidson
Haz-mat training	Oct.	Ben Olds
Injured fire fighters	Nov.	Keith Cullom
Responders to crash	Dec.	Bruce Kurosaki

ARTICLE	MONTH	PAGE
Columns		
Editorials		
Planning is essential	Jan.	4
Keep on truckin'	Feb.	5
Certification: a leap forward	Mar.	4
A fire service forecast	Apr.	6
The biggest challenge	May	4
The death of a fire fighter	June	3
NFPA 1500—One year later	July	2
Praise and paradox	Aug.	4
Managing the future	Sept.	2
No passing fancy	Oct.	2
Out of control?	Nov.	2
Retirement and a size-up	Dec.	1
The haz-mat problem Chief Warren E. Isman		
Federal investigations of haz-mat incidents	Jan.	44
DOT penalty actions	Mar.	52
Truck transportation of haz mats	Apr.	40
Truck transportation—cont.	May	68
Truck transportation: vans	June	44
Carrying liquid haz mats	Aug.	58
Response to liquid carrier fires	Sept.	32
Devices for liquid carriers	Nov.	45
Carrying corrosive liquids	Dec.	41
Survival sense Theodore L. Jarboe		
Fire ground survival tips	Feb.	54
Wildland fire management Dan W. Bailey		
Wildland fire fighters, NFPA form alliance	Jan.	41
Lessons of the past	Feb.	45
Fire season 1987	Apr.	44
A few thoughts	May	54
Leadership in wildland defense	June	42
Keeping pace with change	July	46
When fire fighting heats up	Aug.	67
Learning to take the heat	Sept.	34
The invisible threat	Oct.	40
Shelters in burnover	Nov.	41
Volunteer news & views Carolyn Perroni		
Concern about SARA	Jan.	43
NVFC establishes resource center	Feb.	53
NFA offers volunteers on-campus courses	Apr.	33
Wildland fire resources	May	59
Fuel bill runs out of gas	July	56
Congress considers volunteer bills	Aug.	60
A success story in the making	Sept.	45
It's time to get alarmed	Oct.	44
Recognizing commitment	Nov.	49
Volunteer viewpoint E. James Monihan		
World federation meets in China	Mar.	62
Authors		
Abraham, Jack		
Skills for success	Aug.	23
Allen, Craig R.		
Missing link in haz mat training	Mar.	20
Altman, Jon C.		
Regional response	Oct.	30
Apps, Richard L.		
Corporate donation boosts rural fire protection	Feb.	46
Best, Richard L.		
King's Cross station fire	Jan.	46
Bierwiler, David G.		
Trapped alive	Mar.	27
Bode, John E.		
Voice mail	Sept.	23
Bradish, Jay		
Fire fighter dies in collapse	June	50
Broehm, Ken		
$2 million shopping mall fire	Aug.	18
Buhs, Robert M.		
Minimizing instructor liability	Aug.	56
Burke, David L.		
Solving air supply problems	July	48
Burnside, James L.		
Sharing haz-mat knowledge	Oct.	11
Bytner, Donald E.		
Drug testing: legal implications	Aug.	25
Calderwood, Roberta		
Fire ground command	Aug.	34
Callan, Michael		
Let-it-burn decision	Nov.	30
Carey, Raymond Frank		
Computers, incident simulation, part 2	Jan.	26
Carper, Gayle T.		
Drug testing: legal implications	Aug.	25
Carter, Harry R.		
Response to a close call	July	24
"A failure to communicate"	Sept.	26
Chambers, Mark S.		
Getting more foam to the fire	Aug.	42
Christ, Richard J.		
Computers and fire	Sept.	26
Clark, David F.		
Defusing stress	Nov.	33
Colea, Frank J.		
Senior Management Institute	Mar.	44
Cooke, Paul L.		
Blinded driver—1	Nov.	15
Blinded driver—2	Dec.	31
Crabtree, Sharon K.		
EMS quality assurance	May	20
Craig, John M.		
Fire ventilation	Dec.	12
Curl, Larry		
Ramada Inn plane crash	Jan.	18
Czajkowski, John D.		
Automobile extrication training	May	38
Dextras, Paul A.		
Grain elevator rescue	Dec.	20
Donahue, Michael L.		
Computer help for arson busters	Sept.	10
Estepp, M.H. "Jim"		
EMS quality assurance	May	20
Fahy, Rita F.		
Fire fighter fatality report	June	18
Fire Command staff		
The new aerials	Feb.	33
Fire Command Fellowship winners announced	June	13
NFPA hails the fire service	July	6
Buyers' guide to nozzles	July	18
Before the fire	July	27
Caucus participants receive NFPA memberships	Oct.	60
Franklin, Scott E.		
Urban/wildland fire strategy	May	24
Gallagher, Jim		
Built to burn	Mar.	14
Geil, James A.		
Cabs and cockpits	Nov.	28
Gonzalez, Frank		
Save your back	June	38
Greene, Olin L.		
Oregon's Conflag. Act	May	32
Hale, Nona		
Fire fighters just ask	Sept.	28
Hand, William T.		
Intermodal tank containers—part 1	June	17
Intermodal tank containers—part 2	July	44
Hawkins, John R.		
Haz mat fire!	Apr.	28
Healy, Thomas		
We're getting healthier	July	11
Henry, Martin F.		
Alert 3	Dec.	26
Herschel, Donald L.		
Exploring fire departments	Dec.	16
Herzog, Chuck		
$2 million shopping mall fire	Aug.	18
Hines, Kenneth		
Response to the future	Feb.	16
Hunter, Kem G.		
Shipboard fire fighting	Jan.	12
Hutchinson, David C.		
Preparing VFOs	Mar.	32

1988 INDEX

Cover photos

Photo	Month	Photographer
Denver plane crash	Jan.	Karen Schulenberg
Aerial truck	Feb.	NFPA
Fire fighter	Mar.	Brian Smith
Chicago building, lumberyard fire	Apr.	Tom McCarthy
Bushfire ignites tanker	May	Jeff Cutting
National Fallen Firefighters Memorial	June	Cameron Davidson
Physically fit fire fighter	July	Peter Garfield
Chief Russell Sanders, Louisville, Ky.	Aug.	David Sharpe
Chief James J. Silvernail, Grover, Mo	Sept.	Cameron Davidson
Haz-mat training	Oct.	Ben Olds
Injured fire fighters	Nov.	Keith Cullom
Responders to crash	Dec.	Bruce Kurosaki

ARTICLE	MONTH	PAGE
Columns		
Editorials		
Planning is essential	Jan.	4
Keep on truckin'	Feb.	5
Certification: a leap forward	Mar.	4
A fire service forecast	Apr.	6
The biggest challenge	May	4
The death of a fire fighter	June	3
NFPA 1500—One year later	July	2
Praise and paradox	Aug.	4
Managing the future	Sept.	2
No passing fancy	Oct.	2
Out of control?	Nov.	2
Retirement and a size-up	Dec.	1
The haz-mat problem Chief Warren E. Isman		
Federal investigations of haz-mat incidents	Jan.	44
DOT penalty actions	Mar.	52
Truck transportation of haz mats	Apr.	40
Truck transportation—cont.	May	68
Truck transportation: vans	June	44
Carrying liquid haz mats	Aug.	58
Response to liquid carrier fires	Sept.	32
Devices for liquid carriers	Nov.	45
Carrying corrosive liquids	Dec.	41
Survival sense Theodore L. Jarboe		
Fire ground survival tips	Feb.	54
Wildland fire management Dan W. Bailey		
Wildland fire fighters, NFPA form alliance	Jan.	41
Lessons of the past	Feb.	45
Fire season 1987	Apr.	44
A few thoughts	May	54
Leadership in wildland defense	June	42
Keeping pace with change	July	46
When fire fighting heats up	Aug.	67
Learning to take the heat	Sept.	34
The invisible threat	Oct.	40
Shelters in burnover	Nov.	41
Volunteer news & views Carolyn Perroni		
Concern about SARA	Jan.	43
NVFC establishes resource center	Feb.	53
NFA offers volunteers on-campus courses	Apr.	33
Wildland fire resources	May	59
Fuel bill runs out of gas	July	56
Congress considers volunteer bills	Aug.	60
A success story in the making	Sept.	45
It's time to get alarmed	Oct.	44
Recognizing commitment	Nov.	49
Volunteer viewpoint E. James Monihan		
World federation meets in China	Mar.	62
Authors		
Abraham, Jack		
Skills for success	Aug.	23
Allen, Craig R.		
Missing link in haz mat training	Mar.	20
Altman, Jon C.		
Regional response	Oct.	30
Apps, Richard L.		
Corporate donation boosts rural fire protection	Feb.	46
Best, Richard L.		
King's Cross station fire	Jan.	46
Bierwiler, David G.		
Trapped alive	Mar.	27
Bode, John E.		
Voice mail	Sept.	23
Bradish, Jay		
Fire fighter dies in collapse	June	50
Broehm, Ken		
$2 million shopping mall fire	Aug.	18
Buhs, Robert M.		
Minimizing instructor liability	Aug.	56
Burke, David L.		
Solving air supply problems	July	48
Burnside, James L.		
Sharing haz-mat knowledge	Oct.	11
Bytner, Donald E.		
Drug testing: legal implications	Aug.	25
Calderwood, Roberta		
Fire ground command	Aug.	34
Callan, Michael		
Let-it-burn decision	Nov.	30
Carey, Raymond Frank		
Computers, incident simulation, part 2	Jan.	26
Carper, Gayle T.		
Drug testing: legal implications	Aug.	25
Carter, Harry R.		
Response to a close call	July	24
"A failure to communicate"	Sept.	26
Chambers, Mark S.		
Getting more foam to the fire	Aug.	42
Christ, Richard J.		
Computers and fire	Sept.	26
Clark, David F.		
Defusing stress	Nov.	33
Colea, Frank J.		
Senior Management Institute	Mar.	44
Cooke, Paul L.		
Blinded driver—1	Nov.	15
Blinded driver—2	Dec.	31
Crabtree, Sharon K.		
EMS quality assurance	May	20
Craig, John M.		
Fire ventilation	Dec.	12
Curl, Larry		
Ramada Inn plane crash	Jan.	18
Czajkowski, John D.		
Automobile extrication training	May	38
Dextras, Paul A.		
Grain elevator rescue	Dec.	20
Donahue, Michael L.		
Computer help for arson busters	Sept.	10
Estepp, M.H. "Jim"		
EMS quality assurance	May	20
Fahy, Rita F.		
Fire fighter fatality report	June	18
Fire Command staff		
The new aerials	Feb.	33
Fire Command Fellowship winners announced	June	13
NFPA hails the fire service	July	6
Buyers' guide to nozzles	July	18
Before the fire	July	27
Caucus participants receive NFPA memberships	Oct.	60
Franklin, Scott E.		
Urban/wildland fire strategy	May	24
Gallagher, Jim		
Built to burn	Mar.	14
Geil, James A.		
Cabs and cockpits	Nov.	28
Gonzalez, Frank		
Save your back	June	38
Greene, Olin L.		
Oregon's Conflag. Act	May	32
Hale, Nona		
Fire fighters just ask	Sept.	28
Hand, William T.		
Intermodal tank containers—part 1	June	17
Intermodal tank containers—part 2	July	44
Hawkins, John R.		
Haz mat fire!	Apr.	28
Healy, Thomas		
We're getting healthier	July	11
Henry, Martin F.		
Alert 3	Dec.	26
Herschel, Donald L.		
Exploring fire departments	Dec.	16
Herzog, Chuck		
$2 million shopping mall fire	Aug.	18
Hines, Kenneth		
Response to the future	Feb.	16
Hunter, Kem G.		
Shipboard fire fighting	Jan.	12
Hutchinson, David C.		
Preparing VFOs	Mar.	32

1988 INDEX

ARTICLE	MONTH	PAGE
Isner, Michael S.		
High-rise apartment fire	Mar.	66
Wood-shingle roof group fire	May	70
Karter, Michael J., Jr.		
Fire fighter injuries—1987	Nov.	18
Kempvanee, Robert		
Fire claims historic buildings	May	66
Kidd, J. Steven		
Automobile extrication training	May	38
Klem, Thomas J.		
Fatal live fire training incident	May	44
Interstate bank building fire	July	60
The Hackensack fatalities	Oct.	26
LeBlanc, Paul R.		
Fire fighter fatality report	June	18
Fire fighter injuries—1987	Nov.	18
Lemoff, Theodore C.		
Propane-powered floor buffers	Feb.	58
Luongo, Dan		
Use bad weather drills	Mar.	42
Lynch, Tom		
Let's talk lease/purchase	Feb.	26
MacLeod, Allan P.		
LA County's air operations	Jan.	32
Marshall, Judy		
Let's talk lease/purchase	Feb.	26
McCaffrey, Michael		
Roof ventilation training aid	Mar.	22
McCamey, William P.		
Drug testing: legal implications	Aug.	25
Miles, Jay		
Take a fire to school	Oct.	16
Mock, Lorin L.		
Getting more foam to the fire	Aug.	42
Mullen, Ronald R.		
Flash fire during sprinkler system alteration	Apr.	34
Naylis, Gerard J.		
Water supply: will it be there?	July	22
Nielsen, Robert D.		
Getting tough with false alarms	Apr.	14
Norman, Edward C.		
Foam for vapor mitigation	Apr.	18
O'Neill, Anthony R.		
Ash Wednesday revisited	May	14
Onge, Gregory St.		
Mutual aid in Wisconsin	May	51
Parker, Tim		
Fighting nuclear fires	Oct.	14
Radtke, Larry		
The fire that wasn't	Sept.	37
Teamwork douses fires	Dec.	34
Rakestraw, M. Russell		
Teach fire fighters to think	Mar.	28
Romaniello, James J.		
Five die in 'railroad flat' fire	Feb.	14
Rosenthal, Philip L.		
Day care center plane crash	Jan.	36
Sachs, Gordon M.		
The officer of tomorrow	Apr.	21
A committee that works	May	28
Records for safety	June	14
Safety begins in the fire station	July	15
Sanchez, James M.		
LA County's air operations	Jan.	32
Sanders, Russell E.		
Give your department a SWOT	Aug.	28
Schumacher, Joe		
Sharing a training facility	Mar.	16
Shelly, Craig		
The walls came tumbling down	Sept.	40
Sherman, Michael B.		
Professionalism: where is the fire service?	Aug.	54
Silvernail, Jim		
Trouble on the trestle	Sept.	20
Simon, Jack W.		
A systematic approach to haz-mat incidents	Oct.	46
Smalley, James C.		
A question of when	Feb.	21
Smith, William T.		
"A heap of scrap, a smoking hole"	Aug.	46
Smoke, Clinton H.		
Cruise ship fire	Jan.	28
Snell, Victor R.		
Greenhouse effect	Oct.	19
Spitler, C.R.		
The wall is falling	Nov.	12
Stacey, John W.		
House is arson target	Dec.	23
Steele, Harold		
Region plans for marine fires	Jan.	18
Steenburgen, Harold		
One spark away	Oct.	22
Straseske, Jim		
Testing floor systems	June	47
Stringfield, William H.		
Routine calls or hidden emergencies	Oct.	36
Supkis, Michael		
Rural residents subscribe to fire department	Aug.	50
Sweeney, Michael K.		
Senior Management Institute	Mar.	44
Szmanski, David J.		
House is arson target	Dec.	23
Tamillow, Michael		
One word clue	Nov.	36
Trapp, J.M.		
Master stream safety	Dec.	36
Tryhorn, Kathy		
Exploring fire departments	Dec.	16
Walters, Lynn K.		
Bergenfield burn	Apr.	16
Washburn, Arthur E.		
Fire fighter fatality report	June	18
Weber, Charles		
Testing floor systems	June	47
Weber, Kim		
Wellness at work	June	52
Wilson, Tamara		
Learning to be 'fire service'	June	40
Wright, Charles J.		
Intermodal tank containers—1	June	17
Intermodal tank containers—2	July	44
Administration		
Let's talk lease/purchase	Feb.	16
Senior Management Institute	Mar.	44
The officer of tomorrow	Apr.	21
A committee that works	May	28
Mutual aid in Northern Wisconsin	May	51
Records for safety	June	14
Newly appointed fire chief	Aug.	23
Drug testing: legal implications	Aug.	25
Give your department a SWOT	Aug.	28
Fire ground command	Aug.	34
Rural residents subscribe to fire department	Aug.	50
Professionalism and the fire service	Aug.	54
Voice mail	Sept.	23
"A failure to communicate"	Sept.	26
Fire fighters just ask	Sept.	28
A regional haz-mat response	Oct.	30
Cabs and cockpits	Nov.	28
Exploring fire departments	Dec.	16
Apparatus/equipment		
Response to the future	Feb.	16
Let's talk lease/purchase	Feb.	26
The new aerials	Feb.	33
Corporate donation boosts rural fire protection	Feb.	46
Safety begins in the fire station	July	15
Buyers' guide to nozzles	July	18
Water supply: will it be there?	July	22
Solving air supply problems	July	48
Getting more foam to the fire	Aug.	42
A systematic approach to haz-mat incidents	Oct.	46
Cabs and cockpits	Nov.	28
Exploring fire departments	Dec.	16
Master stream safety	Dec.	36
Aviation fire fighting		
Ramada Inn plane crash	Jan.	16
LA County's air operations	Jan.	32
Day care center plane crash	Jan.	36
Trapped alive	Mar.	27
"A heap of scrap, a smoking hole"	Aug.	46
Alert 3	Dec.	26
Computers and communications		
Computers, incident simulation, part 2	Jan.	26
Computer help for arson busters	Sept.	10
Computers and fire	Sept.	14
Voice mail	Sept.	23
"A failure to communicate"	Sept.	26
Fire fighters just ask	Sept.	28
Education and training		
Computers, incident simulation, 2	Jan.	26
Built to burn	Mar.	14
Sharing a training facility	Mar.	16
Missing link in haz-mat training	Mar.	20
Roof ventilation training aid	Mar.	22
Teach fire fighters to think?	Mar.	28
Preparing VFOs	Mar.	42
Use bad weather drills	Mar.	42
Senior Management Institute	Mar.	44
Bergenfield burn	Apr.	16
Automobile extrication training	May	38
Fatal live fire training incident	May	44
Testing floor systems	June	47
Minimizing instructor liability	Aug.	56
Sharing haz-mat knowledge	Oct.	11
Fighting nuclear fires	Oct.	14
Emergency medical services, rescue		
Trapped alive	Mar.	27
Quality assurance in EMS	May	20
"A heap of scrap, a smoking hole"	Aug.	46
The walls came tumbling down	Sept.	40
The wall is falling	Nov.	12
Blinded driver—1	Nov.	15
Grain elevator rescue	Dec.	20
Alert 3	Dec.	26
Explosions, disasters		
Haz mat fire!	Apr.	28

1988 INDEX

ARTICLE	MONTH	PAGE
Extrications		
Trapped alive	Mar.	27
Automobile extrication training	May	38
The walls came tumbling down	Sept.	40
The wall is falling	Nov.	12
Alert 3	Dec.	26
Fires, emergency incidents		
Ramada Inn plane crash	Jan.	16
Day care center plane crash	Jan.	36
King's Cross station fire, London	Jan.	46
Five die in 'railroad flat' fire	Feb.	14
Trapped alive	Mar.	27
Manhattan high-rise fire	Mar.	66
Haz mat fire!	Apr.	28
Flash fire during sprinkler system alteration	Apr.	34
Fatal live fire training incident	May	44
Fire claims historic buildings	May	55
Wood-shingle roof group fire	May	70
Fire fighter dies in collapse	June	50
Before the fire	July	26
Interstate bank building fire	July	60
$2 million shopping mall fire	Aug.	18
"A heap of scrap, a smoking hole"	Aug.	46
Trouble on the trestle	Sept.	20
The fire that wasn't	Sept.	37
The walls came tumbling down	Sept.	40
Response to a greenhouse effect	Oct.	19
One spark away	Oct.	22
The Hackensack fatalities	Oct.	26
The wall is falling	Nov.	12
Blinded driver—1	Nov.	18
Fire fighter injuries—1987	Nov.	18
Let-it-burn decision	Nov.	30
One word clue	Nov.	36
Grain elevator rescue	Dec.	20
House is arson target	Dec.	23
Alert 3	Dec.	26
Blinded driver—2	Dec.	31
Teamwork douses fires	Dec.	34
Fire fighter fitness, safety		
The officer of tomorrow	Apr.	21
A committee that works	May	28
Fatal live fire training incident	May	44
Records for safety	June	14
Fire fighter fatality report—1987	June	18
Save your back	June	38
Wellness at work	June	52
We're getting healthier	July	11
Safety begins in the fire station	July	15
Drug testing: legal implications	Aug.	25
The wall is falling	Nov.	12
Blinded driver—1	Nov.	15
Fire fighter injuries—1987	Nov.	18
Defusing stress	Nov.	33
Blinded driver—2	Dec.	31
Haz mat		
A question of when	Feb.	21
Missing link in haz-mat training	Mar.	20
Use of foam for vapor mitigation	Apr.	18
Haz mat fire!	Apr.	28
Intermodal tank container—1	June	17
Safety begins in the fire station	July	15
Intermodal tank containers—2	July	44
Getting more foam to the fire	Aug.	42
"A heap of scrap, a smoking hole"	Aug.	46
Trouble on the trestle	Sept.	20
Sharing haz-mat knowledge	Oct.	11
Fighting nuclear fires	Oct.	14
Response to a greenhouse effect	Oct.	19
A regional haz-mat response	Oct.	30
Routine calls or hidden emergencies?	Oct.	36
A systematic approach to haz-mat incidents	Oct.	46
Let-it-burn decision	Nov.	30
One word clue	Nov.	36
Marine fire fighting		
Shipboard fire fighting	Jan.	12
Region plans for marine fires	Jan.	18
Cruise ship fire	Jan.	28
Miscellaneous		
Propane-powered floor buffers	Feb.	58
Getting tough with false alarms	Apr.	14
Fire Command Fellowship winners announced	June	13
Learning to be 'fire service'	June	40
Testing floor systems	June	47
Water supply: will it be there?	July	22
Drug testing: legal implications	Aug.	25
Cabs and cockpits	Nov.	28
Fire ventilation	Dec.	12
Exploring fire departments	Dec.	16
Teamwork douses fires	Dec.	34
NFPA		
Cruise ship fire	Jan.	28
King's Cross station fire, London	Jan.	46
Propane-powered floor buffers	Feb.	58
Manhattan high-rise fire	Mar.	66
Fatal live fire training incident	May	44
Wood-shingle roof group fire	May	70
Fire Command Fellowship winners announced	June	13
Fire fighter fatality report—1987	June	18
NFPA hails the fire service	July	6
The Hackensack fatalities	Oct.	26
Caucus receives NFPAmemberships	Oct.	60
Fire fighter injuries-1987	Nov.	18
Operations		
LA County's air operations	Jan.	32
Response to a close call	July	24
$2 million shopping mall fire	Aug.	18
Fire ground command	Aug.	34
"A heap of scrap, a smoking hole"	Aug.	46
Let-it-burn decision	Nov.	30
Fire ventilation	Dec.	12
Master stream safety	Dec.	36
Prevention, public education		
Ash Wednesday revisited	May	14
Before the fire	July	26
Take a fire to school	Oct.	16
Teamwork douses fires	Dec.	34
Protective clothing, equipment		
Solving air supply problems	July	48
Wildfire		
Ash Wednesday revisited	May	14
Wildland/urban fire strategy	May	24
Oregon's Conflagration Act	May	32
Mutual aid in Northern Wisconsin	May	51
Fire claims historic buildings	May	55

Statement of Ownership, Management and Circulation
(Act of August 12, 1970, Section 3685, Title 39, United States Code)

1. Title of Publication: *Fire Command.*
2. Date of filing: September 30, 1988.
3. Frequency of issue: Monthly.
4. Location of known office of publication: Batterymarch Park, Quincy, MA 02269.
5. Location of the headquarters or general business offices of the publisher: Batterymarch Park, Quincy, MA 02269.
6. Names and addresses of publisher, and editor: Publisher, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269; Editor, Joyce E. Keefe, Batterymarch Park, Quincy, MA 02269.
7. Owner: National Fire Protection Association, Batterymarch Park, Quincy, MA 02269 (a nonprofit technical and educational organization).
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: None.
9. For completion by nonprofit organizations authorized to mail at special rates (Section 423.12 DMM only); The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during preceding twelve months.
10. Extent and nature of circulation.

	Average No. Copies Each Issue During Preceding 12 Months	*Actual Number of Copies of Single Issue Published Nearest to Filing Date*
A. Total No. Copies Printed (Net Press Run)	34,032	33,866
B. Paid Circulation		
1. Sales through dealers and carriers, street vendors and counter sales	0	0
2. Mail subscriptions	30,477	30,266
C. Total Paid Circulation	30,477	30,266
D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies	1,688	1,497
E. Total Distribution (Sum of C and D)	32,165	31,763
F. Copies not distributed		
1. Office use, left over, unaccounted, spoiled after printing	1,867	2,103
2. Returns from news agents	0	0
G. Total (Sum of E and F1 — should equal net press run shown in A)	34,032	33,866

I certify that the statements made by me above are correct and complete.

Joyce E. Keefe
Editor